United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Arcata Field Office
1695 Heindon Road
Arcata, CA 95221-4573
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In Reply Refer To:
CA-330-9210(P)

September 11, 2006

Recipient: _____
Address: _____
City, Zip: _____

Dear _____:

The BLM is proposing a prescribed burn at Strawberry Rock on the north end of the King Range NCA adjacent to Prosper Ridge Road. The primary purpose of the burn is to reduce fuel loading and the potential for catastrophic summertime wildfires.

Enclosed is the preliminary Environmental Assessment (EA) for the project. The EA provides a description of the project and associated benefits and impacts. We are providing an opportunity for public comments on the EA through October 12, 2006.

This is the second public comment period for this preliminary EA. The preliminary EA was made available for a public review and comment from October 18th through November 7th, 2005. Comments were received from five individuals and one local organization during the public comment period. The concerns and issues raised by commentors have been addressed in this latest document. The BLM appreciates the time and effort taken by commentors to review the EA and provide input. The BLM has delayed implementation of the project so that additional comments may be considered and analyzed.

Please mail your comments to:
Arcata Field Office
1695 Heindon Rd
Arcata, CA 95521

Comments may also be faxed to (707) 825-2301 or sent via email to Timothy_Jones@ca.blm.gov. Comments must be received or postmarked by October 12, 2006.

If you have questions contact Tim Jones, Fire Management Officer, at (707) 825-2306.

Sincerely,

Lynda Roush
Field Office Manager

Attachment: Strawberry Rock Prescribed Burn Environmental Assessment Preliminary Review Document

Strawberry Rock Prescribed Burn
Environmental Assessment
Preliminary Review Document

EA # CA-330-05-13

July 11, 2006

Bureau of Land Management
Arcata Field Office
Arcata, CA

Prepared By: */s/ Tim Jones* 07/11/06
Tim Jones, Fire Management Officer

Reviewed By: */s/ Don Holmstrom* 09/11/06
Don Holmstrom, Asst. Field Mgr.

/s/ Gary Pritchard-Peterson 08/10/06
Gary Pritchard-Peterson, King Range Manager

/s/ Robert M. Wick 08/03/06
Bob Wick, Planning/NEPA Coordinator

Section 1.01 Introduction

This proposed action could be categorically excluded from the National Environmental Policy Act (NEPA) in accordance with 526 Department of Interior Manual 2, Appendix 1, 1.12. However, department policy allows for an Environmental Assessment (EA) to be prepared for proposed actions otherwise excluded when the manager thinks it would be helpful in planning or decision making (40 CFR 1501.3 and 516 DM 3.2 B). Based on this guidance, an EA is being prepared for this project to describe the proposed action decision framework.

(a) Need for the Proposed Action

The Strawberry Rock Prescribed Burn is designed to limit the spread and intensity of wildfire from the Prosper Ridge Road and Mattole Campground, King Range National Conservation Area, into the communities of Prosper Ridge and Lighthouse, federally recognized "Communities-of-Interest". The primary goal of this project is to minimize the risk to adjacent private lands by breaking up the continuous fuel bed and reducing fuel loads. Reduction of ground fuels has been the most effective land management tool in reducing the threat of catastrophic wildfire.

Historical fire occurrence in the King Range NCA indicates a large wildfire has occurred every 20 to 40 years. The most recent large wildfire within the King Range NCA was the lightning caused Honeydew Fire of 2003, nine miles southeast of the proposed burn unit. Weather patterns and topography allowed for a running crown fire in heavy timber, exhibiting flame lengths over 300 feet, with fire brands creating spot fires over 2 miles away from the flaming front. The Honeydew Fire was controlled 30 days after ignition at 13,778 acres.

The last large recorded wildfire through the proposed burn unit was in 1960, when approximately 9,000 acres burned. Significant development has occurred since the 1960 wildfire. Approximately half of the homes in the community of Prosper Ridge are situated within the perimeter of the 1960 wildfire.

An additional goal of this project is to meet grassland/coastal prairie habitat objectives outlined in the 2005 King Range National Conservation Area Resource Management Plan and Final EIS that states; maintain healthy, productive grasslands to encourage native species abundance and diversity when feasible and to meet Section 2.52 of the Rangeland Health Standards and Guidelines for California and Northwestern Nevada final EIS (BLM 1998b). Management actions to be used in meeting this objective include the "use of prescribed burns to mimic the pre-mechanization era fire regimes that helped to shape and maintain the distribution and extent of grasslands."

The area was historically coastal prairie grassland that has been invaded by low-growing, multi-stemmed fir trees with little or no economic value. Field notes from an early

survey describe the transect running through the middle of the project area as "rolling 1st rate prairie" (J.S. Murray, US Surveyor-General's Office, September 6, 1860). Surveyors note constructing mounds for orientation purposes due to the absence of trees along this transect. A follow-up survey conducted in 1877 notes the loss of a bearing tree from fire 2 miles southeast of the project area in Fourmile Creek. In addition, the community-developed Lower Mattole Fire Plan states "It is generally accepted that the original inhabitants of north coastal California extensively managed their lands, with practices that included setting fires. These frequent, low intensity burns helped to keep pest populations down, improved the growth and yield of acorns and other desirable non-timber forest products, and improved hunting grounds. It is assumed that Native American burning occurred on this landscape for several thousand years prior to European settlement." (LMFP, Chapter 2, pg. 2)

No large stumps have been found within the proposed burn area. According to a 2003 study conducted by the Mattole Restoration Council more than a third of the grasslands in the adjacent Mattole watershed have converted to brush and forest cover types since 1950, primarily due to fire exclusion from the landscape.

The third goal of this project is to preserve and/or enhance forage for livestock and wildlife.

The project area has a significant wildfire hazard along the wildland/urban interface due to the continuity of flammable vegetation. The area is in a Fire Regime Condition Class 2, rather than the desired Class 1. Furthermore, the current trend of the project area is toward a habitat conversion from coastal prairie grassland to a mono-culture of poorly developed trees lacking a diverse understory, with little or no forage production.

(b) Conformance With Land Use Plan

The proposed action is consistent with the Approved King Range National Conservation Area Resource Management Plan and Final EIS (2005). Specifically, management action FIR 1.2.4 states: Use prescribed fire activities (combinations of broadcast and pile burn) to improve forest health and increase unique habitat improvement (such as disease control, exotic species eradication, coastal prairie maintenance, etc.). Also, FIR 1.5.1 states: Utilize prescribed fire and mechanical fuel reduction methods in managing fuels to create conditions resulting in low intensity wildfires and to reduce fire-spread potential and damages associated with large, high intensity fires.

(c) Relationship to Statutes, Regulations or Other Plans

The proposed action conforms with the following plans:

- King Range Fire Management Plan (1991)
- Arcata Field Office Fire Management Plan (2004)

- Review and Update of the 1995 Federal Wildland Fire Management Policy (2001)
- Managing the Impacts of Wildland fires on Communities and the Environment – The National Fire Plan (2001)
- Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl (1994)
- North Coast Unified Air Quality Management District Particulate Matter (PM10) Attainment Plan (1995)
- California Ambient Air Quality Standards for PM10 (1994)
- Lower Mattole Fire Plan (2002)
- BLM Interim Management Policy for Lands Under Wilderness Review. (Project Area adjoins Wilderness Study Area)

Section 1.02 Proposed Action and Alternatives

(a) Proposed Action

The proposed action would reduce the seedling and pole-sized fir trees through broadcast burning with 60-100% mortality within the project area. The results of this prescribed burn would be significantly lower fuel loading on public land adjacent to private property than exists now. Treated area would be approximately 110 acres of BLM administered land within the King Range National Conservation Area.

A 30 foot saw line and 2 foot wide hand line to mineral soil would be cut around the perimeter of the burn to facilitate blacklining operations. The downwind and/or upslope edges would be burned out with low intensity fire behavior to eliminate fuels, creating a 40 foot wide blackline, before any interior firing begins. Although dozers can rapidly construct fireline they would not be used as they greatly increase the ground disturbance and fireline rehabilitation needs, yet do little to increase the width of the blackline.

Weather prescription and firing patterns would be conducive to low to moderate fire intensity in the grass and scattered trees (flame lengths of 1 to 6 feet). Moderate to high fire intensity (flame lengths of 6 to 10 feet) is preferred within the dense tree stands. After blacklining operations have sufficiently enhanced the fire line, as determined by the Prescribed Fire Burn Boss with concurrence of the Ignition and Holding Specialists, ignitions patterns may be adjusted enabling flame lengths to exceed 10 feet. Ground heating sufficient to kill non-target species is not expected to occur due to the absence of any dead and downed heavy fuels.

Burning would not begin until:

1) the Remote Atmospheric Weather Station (RAWS) on Cooskie Mountain has recorded over 0.5 inches of precipitation within the prior 20 days

2) the observed 100-hour and 1000-hr dead fuel moisture content have reached at least 15% for the North Coast Predictive Services Area, as found at http://gacc.nifc.gov/oncc/predictive/fuels_fire-danger/index.htm.
3) weather is within prescription and forecasted to remain as such
4) all required ignition and holding resources are on scene
5) the GO/NO GO checklist has been completed by the Prescribed Fire Burn Boss with concurrence by the Ignition and Holding Specialists and BLM Line Officer

Spotting potential is very low for this burn because adjacent dead and downed fuels, snags, and drainages will have acquired significant moisture once burn prescriptions (items 1-3, above) have been achieved.

Prior to burn initiation, a Prescribed Fire Plan would be developed with the following required elements:

- Agency Administrator Approval
- Technical Review Certification
- Management Summary and Risk Assessment
- Complexity Elements Summary
- Cost Estimate
- Burn Area Description
- Description of Fuels
- Project Objectives
- Environmental Parameters and Prescribed Fire Prescription
- Fire Behavior Narrative
- Test Fire Provisions
- Ignition and Holding Plan
- Scheduling and Public Safety Provisions
- Required Workforce and Equipment List
- Escaped Fire Plan
- Medical Plan
- Smoke Management Plan
- Mop Up and Patrol Plan
- Monitoring Plan
- Notifications
- Go/No Go Checklist
- Communications Plan
- Prescribed Fire Report
- Job Hazard Analysis
- Fire Behavior Calculations

The Prescribed Fire Burn Plan would undergo technical review by the Bureau of Land Management's Arcata Field Office Fire Management Officer, Northern California Regional Fire Management Officer, State Fuels Management Specialist, and by the California Department of Forestry and Fire Protection.

Approval shall be obtained by the Arcata Field Office Manager and the California State Office Fire Management Officer. The approved Prescribed Fire Plan constitutes a delegation of authority to burn. No one has the authority to burn without an approved plan or in a manner not in compliance with the approved plan. Personnel will be held accountable for actions taken which are not in compliance with elements of the approved plan regarding execution in a safe and cost-effective manner.

If the Prescribed Fire Burn Boss determines any spot fire or slopover outside the project area has the potential for rapidly exceeding the capacity of on site suppression resources it would be declared an escaped fire. All ignitions shall cease and the Prescribed Fire Burn Boss would act as Incident Commander until control is achieved or until relieved by the CDF Battalion Chief on duty. The Incident Commander would organize all on-site resources for an aggressive response until control is achieved.

Fuel reduction, tree mortality, and cost effectiveness will be assessed within the first year of treatment. Visual impacts, species composition, and invasive exotics will be surveyed and monitored annually for five years following activities. Treatment efficacy and alternative methods shall be re-examined after five years.

(b) Alternatives

A. Burning grassland and open tree stands only.
This alternative would include a significantly cooler weather prescription than the proposed action, thus allowing low intensity fire to carry in the fine fuels (grasses) only, and would eliminate the possibility of fire moving through the dense, young tree stands within the burn perimeter. Smaller trees within open stands with significant grass understory would be the only ones affected by torching, and singe-kill would be greatly reduced.
Area treated by prescribed fire within the proposed burn unit would be approximately 80 acres.

B. Pre-treating fir stands followed by broadcast burning the entire unit.
Approximately 20-50% of the young trees within the dense fir stands would be cut down at least twenty days prior to ignition. The resulting slash would be cut to within one foot above ground level and positioned within the remaining trees to facilitate mortality through singe and/or consumption. Slash would not be piled higher than one foot to minimize heat retention time on soils.
This alternative would allow for burning under a significantly cooler and moister weather prescription than the proposed action to achieve the desired fire effects. This would consequently decrease the potential for spotting and slopovers, thus decreasing the potential for an escaped fire to occur.
Area treated by cutting within the proposed unit would be approximately 12.5 acres.
Area treated by prescribed fire would be the same as the proposed action.

C. No fire, but masticate young trees within the unit using rubber-tired or tracked equipment.

Approximately 95% of the young trees within the dense fir stands and open grassy areas would be masticated to small chips. Seedlings would not be greatly affected.
Treated area within the proposed unit would be approximately 93 acres.

D. Manual tree cutting and pile burning.
Approximately 95% of the young trees and brush species within the dense fir stands and open grassy areas would be cut down at least twenty days prior to ignition. The resulting slash would be piled and burned throughout the treatment area, with the burn piles' "footprints" affecting approximately 3% of the total treatment area. Seedlings would not be greatly affected.
This alternative would allow for burning under a significantly cooler and moister weather prescription than the proposed action to achieve the desired fire effects. This would consequently decrease the potential for spotting and slopovers, thus decreasing the potential for an escaped fire to occur.
Treated area within the proposed unit would be approximately 93 acres.

E. No Action – Neither broadcast burning, pile burning, nor mastication would be completed.

Section 1.03 Affected Environment

(a) General Setting

The project is located in Township 2S, Range 2W, Section 19 and Township 2S, R3W, Section 25 (latitude 40º 16' 41" N, longitude -124º 20' 53" W). The project is in the immediate vicinity of Strawberry Rock up to Barksdale Table, adjacent to the Prosper Ridge Road.

The project area is outside of, and adjacent to, the King Range Wilderness Study Area (WSA) (CA-050-112). Therefore, the proposed action would not impair the suitability of this WSA for preservation as a wilderness area. Furthermore, use of prescribed fire is consistent with WSA management objectives.

(b) Affected Resources

Summary Table

Critical Element/Resource	*Present?*	*Affected?*	*Critical Element/Resource*	*Present ?*	*Affected?*
Water Quality	N	N	Air Quality	Y	Y
T & E Fish Species	N	N	Cultural Resources	N	N
T & E Vegetation	N	N	ACECs	N	N
T & E Wildlife	Y	N	Floodplains	N	N
Prime/Unique Farmlands	N	N	Invasive Species	Y	Y
Nat. Amer. Relig. Concern	N	N	Wetlands/Riparian	N	N
Hazardous/Solid Wastes	N	N	Social/Economic	Y	Y
Vegetation (incl. sensitive spp., cryptogams)	Y	Y	Wilderness/Wilderness Study Areas	Y	N
Aquatic Habitats/Species (Incl. sensitive species)	N	N	Terrestrial wildlife habitat/species (incl. sens. spp)	Y	N
Essential Fish Habitat	N	N	Health/Safety/Law Enforcement	Y	Y
Recreation	Y	Y	Visual Resources	Y	Y
Realty	N	N	Wild and Scenic Rivers	N	N
Environmental Justice	N	N	Soils/Geology	N	N

<u>Vegetation</u>
The project area consists of California annual and non-native and native perennial grasses (California coastal prairie), with many forb species that are being displaced by encroaching Douglas-fir trees. These trees, however, are displaying 'Krumholtz'-like characteristics; that is, structural features typically seen in alpine or tundra habitats having been exposed to chronic high velocity winds. These high winds cause the trees to

have multiple stems instead of one, their stature to become dwarfed, and their branches to exhibit flagging in the direction of the predominate winds.

Sawyer and Keeler-Wolf describes this area as coastal terrace prairie consisting of a mosaic of California oatgrass series and Pacific reedgrass series that often mix with tree series at a coarser scale (Douglas-fir). Typical species found in these types, that are also found within the project area include bracken (*Pteridium aquilinum*), California oatgrass (*Danthonia californica*), Douglas-fir (*Pseudotsuga menziesii*), Pacific reedgrass (*Calamagrostis nutkaensis*), tall-oatgrass (*Arrhenatherum elatius*), velvet grass (*Holcus lanatus*), vernal grass (*Anthonxanthum odoratum*), coyote brush (*Baccharis pilularis*), salal (*Gaultheria shallon*), and California blackberry (*Rubus ursinus*). The Nature Conservancy Global Heritage Program has listed the California Oatgrass and Pacific Reedgrass series' within coastal prairies, bluffs, terraces, wetlands and coastal uplands of all types as globally rare and threatened in California.

Within the project area, there are many remnant native perennial grasses that have been identified including California oatgrass (*Danthonia California*), California mountain brome (*Bromus carinatus*), prairie junegrass, (*Koeleria macrantha*), and tall trisetum (*Trisetum canescens*). Typical non-native annual grasses include velvet grass (*Holcus lanatus*) and dogtail (*Cynosurus echinatus*). Common forbs representative of the site include strawberry (*Fragaria chiloensis*), wild cucumber (*Marah oreganus*), bracken fern (*Pteridium aquilinum*), self heal (*Prunella vulgaris* ssp. *lanceolata*), western dog violet (*Viola adunca*), and yarrow (*Achillea millifolium*). Typical encroaching shrubs and stunted small trees include coyote brush (*Bacharris pilularis*) and Douglas-fir (*Pseudostuga menziesii*).

Annual species of grasses and flowering plants are threats to grasslands that are, to some extent, more controllable through low cost management methods. The original invaders of California native prairies, annual grasses are well known to out-compete native grasses and forbs. Of equal importance is their tendency to produce large amounts of above-ground biomass that forms a thick thatch inhibiting growth and germination of native species. All of these annual species are very controllable through the use of well timed, carefully managed grazing. Grazing animals reduce non-native seed production and thatch while creating the kind of disturbance with which the prairie has evolved. In all the cases where there is a healthy, diverse prairie remaining in Santa Cruz County, there are grazing animals. Without the use of grazing and fire, the control of all weeds becomes impossible on the scale that it is needed. (Holland, 1986).

Most coastal prairie species are, to some extent, disturbance dependent. That is, without soil disturbance and, especially, thatch removal they fail to germinate. Historically, soil disturbance and thatch removal occurred in conjunction with large herbivores which became extinct in the late Pleistocene. Today, many species owe their existence to grazing, trail side soil disturbance, and other human induced disturbances. Much of our area's coastal prairie has been destroyed due to agriculture and development. The remaining areas have been invaded by exotic weeds such as annual fescues (*Vulpia bromoides*), bromes (esp. *Bromus diandrus*), velvet grass (*Holcus lanatus*), and thistles.

The remaining, in tact areas of coastal prairie are recognized by the patchy presence of California oatgrass (*Danthonia californica*) and/or wildflowers such as native bulbs (*Brodiaea* and *Triteleia* species), lupines (Lupinus nanus), self-heal (*Prunellus vulgaris*), and many others.

Invasive Species

Invasive species that are found within the project site include Scotch broom, (*Cytisus scoparius*), tansy ragwort, (*Senecio jacobeae*), bull thistle (*Cirsium vulgare*), Canada thistle (*Circium arvense*), and naturalized invasive annual grasses. The scotch broom has been manually treated for four consecutive years and treatment has entered the seed bank depletion phase. The area infested by scotch broom is approximately ¼ acre in size. Tansy ragwort has recently been detected in the upper portions of the project area at Barksdale table and on adjacent private lands to the east. Tansy ragwort is highly toxic to cattle and horses causing irreversible liver damage. It is primarily spread through wind dispersed seeds; however it can reproduce by broken root fragments. Tansy ragwort easily out-competes native and naturalized grasses and forbs. Hand pulling has been the most common technique used for removal in pastures in early phases of infestations. Soil moisture is critical, as drier soils allow root breakage and pulling in wet soils removed large soil clumps. Pulled plants must be buried deeply or burned. Prescribed burning is traditionally used in agricultural croplands as a preemergence weed treatment. In ragwort control, there were several control burns conducted in 1982 at an infested site in Redwood National Park, California, but the results were inconclusive. (Bossard et al, 2000)

Bull and Canada thistles are not common within the project area and are distributed as scattered small clusters or individuals.

Soils

In general, the soils of Strawberry Rock are composed of fractured sandstones and shale typical of coastal belt Franciscan marine sediments. Younger marine terraces cap portions of the coastal bedrock outcrops. Most recently, a 1984 soil classification for the west slope of the King Range was completed and described the soils of this area as composed predominately of the Bruhel series which are very deep and well drained. They are formed in residuum and colluvium from sedimentary rock. The Bruhel soils are on level and gently sloping marine terraces and have slopes of 0-50%. The annual precipitation is about 100 inches and annual air temperature is about 52 degrees F.

The taxonomic class is defined locally as fine, mixed, isomesic pachic argiustolls. Typically, the surface layer is very dark brown silt loam with a pH of slightly acid to neutral. The soils tend to be soft, friable, and slightly sticky, with many very fine to fine and common medium roots with 5% gravel. This condition goes to a dept of about 60 inches. Often the fractured sandstone lithic contact is beyond the 60 inch depth.

Permeability of the Bruhel soil is moderate. Available water capacity is high. Effective rooting depth is 60 or more inches. Runoff is slight to medium and the hazard of water erosion is high under bare soil conditions.

These are productive upland soils capable of year round use if proper management practices are utilized. Management should be aimed at keeping a good vegetative cover on the land to prevent soil erosion and water loss. Proper livestock distribution should be an essential factor in any management plan.

In May of 2004, six soil samples were collected from the Strawberry Rock project area and sent to the Soil and Plant Laboratory, Inc. in Santa Clara, California and tested for fertility limiting factors. The pH range was found to be acidic, between pH4.8 to pH5.3. Salinity, sodium and boron were safely low in all samples and the SAR values indicated that calcium and magnesium adequately balance soluble sodium throughout. Nutritional data revealed deficient nitrogen and phosphorus in all samples; with one sample being low in potassium as well. Calcium levels were fair, with magnesium sufficient. For establishment of new grasses, the standing recommendation is to insure adequate nitrogen, phosphorus and potassium are available for healthy root development.

The subject grasslands are on acidic soils. Natural coastal prairies can and do occur on acidic soils. A UC Berkeley document posted to the web in 1994 entitled Plant Communities of California, defines Northern Coastal prairie as occurring from Monterey Bay to SW Oregon; near sea level to 5000', maritime; fog and strong winds may be present; soils not very saline; slightly acid; good agricultural soils, high species diversity, fire adapted; and that fire suppression is not a good influence. Further, it is commonly known that high rainfall rates, such as experienced in the King Range, move soils in an acidic direction regardless of the vegetative cover.

Cultural Resources and Native American Consultation

The project area has been extensively surveyed by qualified archaeologists and no historic, ethnographic, prehistoric sites or materials were located. Prefield examination of literature and ongoing consultation with the Bear River Band of Rohnerville Rancheria for the larger area also failed to identify any sacred sites or traditional gathering areas within the Area of Potential Effect (APE) of the proposed project.

Recreation

Recreation uses in the vicinity of the project area are primarily associated with hunting, picnicking, wild strawberry picking, paragliding, and sightseeing along Prosper Ridge Road. Estimated annual visitor use for hunting is approximately 500 visits, and for sightseeing, 500 visits. A relatively small number of visitors use the road to access Windy Point Road and hike south to the Lost Coast Trail.

Visual Resources

The project area is located in an area with moderate to high scenic qualities and is within the Frontcountry Zone as described in the 2004 King Range Resource Management Plan. Management activities and uses within this zone should generally retain the landscape's existing character although moderate changes may be acceptable in the short term. In any event, management activities should not dominate the view of the casual observer in the long term.

Social/Economic

The project is in the wildland-urban interface and adjoins a rural residential subdivision with both year-round and part-time residents. Fire danger is a considerable threat to private land developments in the region due to heavy fuel loading and dry summer weather patterns. Ranching has historically been a component of the economy, and the project area is part of a BLM grazing allotment.

Section 1.04 Environmental Impacts

(a) Impacts of the Proposed Action

Air Quality

The project would produce smoke during ignition operations on burn days, with minimal residual smoke thereafter. Smoke exposure and amounts are not expected to cause health or safety concerns to personnel or the public. Smoke impacts to Prosper Ridge Road, residents of Prosper Ridge, and King Range National Conservation Area recreation visitors are expected to be minimal. See also Mitigation Measures below.

Burning on Permissive Burn Days, as determined by the North Coast Unified Air Quality Management District or with a variance granted by the District, has significantly less impact than smoke from a wildfire. High intensity wildfires in the King Range usually occur during mid to late summer, concurrent with a high pressure system aloft and poor smoke dispersal. These conditions were present during the 2003 wildfires in southern Humboldt County, leading to very poor air quality, poor visibility, and required closing of some schools.

Vegetation

Flammable vegetation shall be significantly reduced within the burn area. Although the dense, young tree stands would leave behind standing dead snags (average 4 to 7 feet in height), the available fuel for a summertime wildfire would be greatly diminished. The potential for a wildfire becoming a running crown fire with long distance spotting would be eliminated within the burn area. Fir seedling mortality would be significant.

Coastal grasslands are generally less degraded than those inland and have higher potential for restoration and conservation (Hatch et al, 1999). Prescribed fire is an important management tool for reducing the dominance of non-native species in annual grasslands; both annual and perennial native species show strong vegetative responses in the subsequent growing season (Dyer, 2002). Dyer, 2002, also showed that seeds from burned plants were larger and had higher germination rate than seed from unburned plants. The strong relationship between long-term viability and seed size suggests greater maternal provisioning and increased seed quality subsequent to burning and grazing. The prescribed fire would have a beneficial effect on grass and forb regrowth and the vigor of the existing perennial grass stands would be renewed.

Within the first year following treatment, prescribed fire would increase soil fertility, available soil moisture, available light and heat, and reduce competitive annual vegetation and thatch favoring renewal of perennial grasses (additional tillering) and forbs. Even if the grasses burned were green; the heat would be sufficient to render annual grass seed unviable. Following fire, there would be germination opportunities for perennial grass and forb seed from the seed bank, and enough soil moisture and nutrients available to provide for establishment through the first season of growth. Perennial seedlings unable to extend roots into deeper moister soils in their first season die with the

summer drought (Davis & Mooney 1985). Depletion of soil moisture by fast-growing annual grasses during the early growing season is largely responsible for their dominance in annual grasslands and a major limitation of restoring native perennials.

Impacts to the native perennial grass planting that was installed in the fall of 2005 will not be affected as the area will be excluded from fire.

Invasive Species

The timing of a prescribed burn is critical to successfully control the weeds. Burns should be conducted following seed dispersal and senescence of desirable grasses and forbs and before viable seed production by noxious weeds. Prescribed burning in rangeland also can stimulate annual and perennial grass growth (DiTomaso et al. 1999a; Sheley et al. 1999a) and enhance native forb diversity (DiTomaso et al. 1999a). However, it is important to note that fire may promote colonization by many weeds or rapid recovery of noxious perennial species. In addition, infestations of invasive annual grasses such as *B. tectorum* may increase following burning. None of the invasive species within the project area are expected to increase as a result of the prescribed fire. It is anticipated that the prescribed fire would destroy this year's seed crop of viable seed yielded by the invasive species (tansy ragwort and the thistles). While it is possible that seed bank deposits of scotch broom, tansy ragwort, canada or bull thistle may survive and be stimulated to grow; follow up hand work is planned for the area in the spring following treatment. Any new plants would be manually removed.

Soils

Prescribed burning of the Strawberry Rock pasture should increase the fertility of the soil for plant growth within the first two years providing for lush vegetative regrowth. Recent long term research has shown that dormant-season fire was followed by increases in grass cover, forb cover, species richness and concentrations of foliar P, K, Ca, Mg and Mn (Stromberg et al, 2002). The Strawberry Rock fire would likely take place in the month of November, when native perennial grasses are entering their period of relative dormancy. Stromberg et al's research went on to suggest that dormant-season burning may be the preferable method for restoring fire in shortgrass prairie ecosystems where fire has been excluded for a prolonged time period. No soil chemistry properties are expected to change as a result of this prescribed burn. Surface erosion should not increase significantly as the majority of the project site is level or gently sloped. Further, the basal portions of perennial grasses will persist following fire and slow any overland water flow, thus aiding with infiltration. There will be an increase in soil moisture with the removal of annual vegetation within the first year which will benefit regrowth of forbs and grasses from the seed bank, as well as establishment of transplanted perennial grasses.

It is important to note that any bare patches induced by this proposed project will be on mild to moderate slopes. Furthermore, there will be minimal soil heating in order to retain basal portions of perennial grasses and forbs that shall slow overland flow of water and increase opportunity for infiltration.

Cultural Resources

The project would have no effect on properties which may be eligible for the National Register of Historic Places and qualifies as a categorical exemption.

Recreation

Hunting opportunities would improve under the Proposed Action because of the increased visibility. Number of deer per acre may also increase due to better forage, thus increasing the likelihood of hunting success. Impacts on sightseers are discussed under "Visual Resources".

Visual Resources

The BLM's visual resources contrast rating system was utilized in assessing the visual impact of the proposed project. Most visitor use in this area occurs along the Lost Coast Trail and Mattole Campground, with a smaller amount of visitor and residential use occurring along Prosper Ridge Road. These locations were all included in the analysis of visual impacts from the project.. The project area cannot be seen from either the Lost Coast Trail or Mattole Campground so visual impacts from these two locations are non-existent. The proposed burn area would be seen from several locations along Prosper Ridge Road, therefore, a contrast rating was utilized for this location. The proposed burn would create short-term strong contrasts in color (from green to black) as a result of trees being burned, the mosaic of vegetation would be changed, and a moderate change in texture would occur. The visual contrast was quantified with a rating score of "15", which is defined as "Attracts attention and begins to dominate".

The 2004 King Range Resource Management Plan identified this area to be managed under Visual Resource Class 2 for the long-term and Class 3 for the short term. The objective of Class 2 is to retain the landscape's existing character. Management activities can be seen, but should not attract the attention of the casual observer. The objective of Class 3 is to partially retain the landscape's character. The level of change can be moderate, and may attract attention. The proposed project would be consistent with this management prescription. Short-term impacts would meet class 3 objectives, while long-term impacts would be reduced to class 2 levels as the small dead trees fall over the next 3 to 10 years and no longer be seen from the road. The project would also retain the vistas and open coastal prairies of the northern King Range, which have been identified as important visual resources in the RMP.

The assessment of visual impacts of this action are complicated by the fact that fire is a natural part of the King Range ecosystem; thus visual affects of fire are an integral part of the natural landscape. The ghostly white snags that remain several years after a fire are considered to be visually pleasing and photographically desirable by many visitors. Although the visual resource management impacts were based on changes to the existing landscape, the long term changes should be considered negligible, since fire is a natural part of this ecosystem.

Social/Economic

The project would reduce the threat of high intensity summertime wildfire and associated economic/property impacts to surrounding private land residences. Wildfires moving through the area would be significantly easier to control, and potential for fire brands to develop spot fires outside of the unit would be greatly diminished. Also, the improvement of grazing forage would result in minor economic benefits.

With the mortality of currently established seedlings, maintaining the coastal prairie would require re-treatment in approximately 15-20 years.

Terrestrial Species including T&E Species

The grasslands of the northern portion of the King Range provide habitat for a variety of terrestrial species including herpetofauna such as red-legged frog, western fence lizard and western rattlesnake. Representative birds include western meadow lark, American kestrel, peregrine falcon and many species of songbird. Examples of mammals that use the project area include black-tailed jack rabbit, Roosevelt elk, black-tailed deer, California vole, and coyote. Negative impacts to the treatment area could result from increased human presence and mechanical equipment use for the first year following treatment in the form of disturbance to deer or elk using coastal prairies during the fall rut. These impacts are expected to be minimal and related to human presence and on the ground disturbance from fire, equipment usage, and hand crew activities.

The project area falls in the Pacific Avifaunal Biome which is comprised of bird conservation regions from south-coastal Alaska to northern Baja California. Conservation issues impacting birds in this region include habitat loss and fragmentation, exotic species and effects of fire suppression. Recommended actions, as discussed in Partners in Flight North American Landbird Conservation Plan (2004), include conducting restoration and management of coastal habitat types to support native processes, conditions, and species. Because this action is proposed for the winter non-breeding season there is little negative impact anticipated from burn activities. Mortality of encroaching conifers and restoration of grassland habitat in years following the initial treatment are likely to bring about moderate beneficial results to local bird species dependent on grassland habitats. This impact would be realized in the form of increased habitat suitability for grassland species.

The proposed action area is within critical habitat for northern spotted owl (CHU CA-50) and marbled murrelet (CHU CA-05-a). The project area does not contain suitable habitat for either species and the nearest stand of suitable habitat occurs more than one and a half miles southeast of the project site. No marbled murrelets or northern spotted owls have been detected within one mile of the proposed action site. This action is expected to have no effect on northern spotted owls, marbled murrelets or their respective critical habitat.

(b) Impacts of Alternatives

Alternative A - Burning grassland and open tree stands only.

Air Quality
Smoke emissions would be significantly less during burning operations through this alternative than the proposed action and than Alternative C; however the potential for poor air quality during summer wildfires would not be greatly reduced.

Vegetation
Flammable vegetation would be reduced through alternative A, but to a much lesser extent than the proposed alternative. The potential for a summertime wildfire becoming a running crown fire with long distance spotting would not be greatly diminished through this alternative.

Coastal grasslands are generally less degraded than those inland and have higher potential for restoration and conservation (Hatch et al, 1999). Prescribed fire is an important management tool for reducing the dominance of non-native species in annual grasslands; both annual and perennial native species show strong vegetative responses in the subsequent growing season (Dyer, 2002). Dyer, 2002, also showed that seeds from burned plants were larger and had higher germination rate than seed from unburned plants. The strong relationship between long-term viability and seed size suggests greater maternal provisioning and increased seed quality subsequent to burning and grazing. The prescribed fire would have a beneficial effect on grass and forb regrowth and the vigor of the existing perennial grass stands would be renewed. Many forbs and grasses would have the light availability and warmth to germinate in the absence of the self-mulching relict thatch.

Within the first year following treatment, prescribed fire would increase soil fertility, available soil moisture, available light and heat, and reduce competitive annual vegetation and thatch favoring renewal of perennial grasses (additional tillering) and forbs. Even if the grasses burned were green; the heat would be sufficient to render annual grass seed unviable. Following fire, there would be germination opportunities for perennial grass and forb seed from the seed bank, and enough soil moisture and nutrients available to provide for establishment through the first season of growth. Perennial seedlings unable to extend roots into deeper moister soils in their first season die with the summer drought (Davis & Mooney 1985). Depletion of soil moisture by fast-growing annual grasses during the early growing season is largely responsible for their dominance in annual grasslands and a major limitation of restoring native perennials.

Alternative A, however, would not have the most efficient, maximized effect on grassland prairie preservation. While many of the trees within the existing grassland stands would be burned, the sapling dense tree thickets would not be burned, thus leading to a quick fir re-encroachment back into the treated prairie. There would still be benefits to the existing open grassy areas as currently defined lasting several years following

treatment, as seedling mortality would be significant. However, the defined grassy areas would continue to shrink if the dense sapling thickets are not treated as well.

Impacts to the native perennial grass planting that was installed in the fall of 2005 will not be affected as the area will be excluded from fire.

Invasive Weeds
See analysis in Impacts of the Proposed Action.

Soils
See analysis in Impacts of the Proposed Action.

Cultural Resources
See analysis in Impacts of the Proposed Action.

Recreation
There would be fewer opportunities for hunting success under this alternative as compared to the Proposed Action because there would be less visibility as more trees would be left standing and unburned. Impacts on sightseers would also be slightly less than the Proposed Action because they would see less burned trees in the short term. After approximately three years, the impacts on sightseers would be the same as the Proposed Action because many of the burned trees would have fallen over and not be visible from the road.

Visual Resources
Visual resource impacts would be less in the short term under this alternative as fewer burned trees would be seen from the road. Impacts in the long term would be the same as the Proposed Action.

Social/Economic
The project would be less effective in reducing the threat of high intensity wildfire and associated economic/property impacts to surrounding private residences than the proposed action. Firebrand potential would not be greatly reduced. Also, the improvement of grazing and associated economic benefits would be less than the proposed action.

The cooler weather prescription allowable under this alternative would decrease the potential for spotting and slopovers, however, this alternative would greatly increase the amount of unburned fuel adjacent to fire lines and within the burn perimeter. Length of fire lines and hose lays would be increased by approximately 2700 feet and critical holding points would be at less topographically optimal locations than the proposed action. Operational resources (fire engines, hoselays, crews, and overhead), mop-up and patrol periods, firefighter exposure, and operational costs would be increased by approximately 50% in order to mitigate hazards and provide for firefighter and public safety.

The currently established seedlings within the 100 acres of treated area would succumb, however the dense stands of young firs (approximately 12.5 acres) would become a seed source within the unit. Re-treatment would be required sooner, within 5-15 years, and the dense stands of young firs would continue conversion into a closed, stunted forest.

Terrestrial Species including T&E Species
Impacts to non-T&E species remain negligible. Beneficial effects derived from restoring native habitat conditions and processes would be less significant and would be achieved over a longer time frame than the proposed action.

Alternative B - Pre-treating fir stands followed by broadcast burning the entire unit.

Air Quality
See analysis in Impacts of the Proposed Action.

Vegetation
See analysis in Impacts of the Proposed Action.

Invasive Weeds
See analysis in Impacts of the Proposed Action.

Soils
See analysis in Impacts of the Proposed Action.

Cultural Resources
See analysis in Impacts of the Proposed Action.

Recreation
See analysis in Impacts of the Proposed Action.

Visual Resources
Visual resources (scenic quality) would be less impacted than the proposed alternative in the first three to ten years after treatment under this alternative than the proposed action as fewer burned trees would be visible from the road. Impacts in the long term would be the same as the Proposed Action.

Social/Economic
Cost to the government would be approximately twice the cost of the proposed action. However, there is potential for even greater costs and impacts to occur. Should conditions conducive to the burn prescription become unavailable after cutting 20-50% of the trees in the dense stands, the slash would need to be removed before the next wildfire season.
Longevity of this treatment would be the same as the Proposed Alternative, with re-treatment required in approximately 15-20 years.

Terrestrial Species including T&E Species
See analysis in Impacts of the Proposed Action.

Alternative C - No fire, but masticate young trees within the unit using rubber-tired or tracked equipment.

Air Quality
There would be no smoke emissions via vegetation through this alternative. The potential for poor air quality during summer wildfires would be greatly reduced. However, dust would be prevalent downwind from the project site during the treatment, estimated to last one week. Diesel exhaust emissions would be visible but is not expected to impact any residents or recreationists.

Vegetation
Flammable vegetation would be reduced through alternative C, but the seedlings and smallest trees would not be significantly affected. Although complete manual removal and pile burning are feasible from a logistical standpoint, mechanical removal will not be effective in removing the majority of the trees; the smallest ones. These seedlings are too numerous to remove and often hidden by grass. The unit would require re-treatment much sooner than the proposed alternative.
There would not be overall benefits to perennial grasses and forbs that would result from a broadcast prescribed burn; no increased germination opportunities and no increase in soil fertility. Annual wildflower diversity would not benefit as germination would still be inhibited by the presence of existing decadent thatch.

Invasive Weeds
Although equipment will be inspected before operations begin, there is still the potential for invasive species to arrive on site within the mastication equipment.

Soils
Soils would likely not suffer from compaction as a result of repeated parallel passes with a heavy, rubber tired, or tracked masticating machine. The soil in the project area is described as a silty loam and is born of weathered sandstone. Clay content and compaction issues are not described as characteristics of these soils. However, over the short term, the effects of mechanical equipment could increase overland flow of water and decrease the rate of infiltration. Depending on soil moisture upon project initiation, some ruts could be formed that could lead to accelerated erosion. Using only mechanical control, there would be some benefit to soils by way of increased available soil moisture and increased light availability; in areas of treatment, however, the added value of increased soil fertility would not occur. In terms of coastal grassland species, the prairie would not be benefited to the greatest extent feasible.

Cultural Resources
See analysis in Impacts of the Proposed Action.

Recreation
The mastication equipment would significantly increase noise on site for the duration of the treatment, estimated to last one week. This may result in a reduction in visitor satisfaction levels exceeding 50%.

Visual Resources
Impacts of the visual resource would be variable and partially dependent on the quality of work during the mastication process. Portions of trees that are masticated oftentimes appear shredded and are very unsightly because of their unnatural appearance. Furthermore, tracks left behind by heavy equipment will be visible across the treatment area for the first year. Experienced operators, however, can minimize these negative impacts but not eliminate them. This alternative would have the greatest impact on scenic quality during the first three years following treatment.

Social/Economic
The reduced threat of high intensity summertime wildfire and associated economic/property impacts to surrounding private land residences would be the same as the proposed action. However, the unit would require re-treatment much sooner than the proposed alternative. Established seedlings missed or only top-killed by masticating equipment would require re-treatment within approximately 3-5 years.
Cost to the government would be approximately six times the cost of the proposed action.

Terrestrial Species including T&E Species
Mastication would remove the existing Douglas-fir shrub/sapling component entirely, leaving no small snags that would serve as perch locations for foraging avifauna. This alternative would result in short-term, minor negative impacts to coastal grassland dependent species.

Alternative D - Manual tree cutting and pile burning.

Air Quality
Although burning will only take place on Permissive Burn Days, as determined by the North Coast Unified Air Quality Management District or with a variance granted by the District, total emissions will be greater than the proposed alternative. The combustion and smoldering phases of smoke emission will be significantly increased both in total amount of material burned and over a greater period of time. Pile burning would occur over approximately ten days. Residual smoke will be greatly increased as smoldering will continue over nighttime hours.
Due to air quality regulations, swamper burning (piling and burning vegetation as it is cut) will not be allowed.

Vegetation
Flammable vegetation would be reduced through alternative D, but the seedlings and smallest trees would not be significantly affected. Although complete manual removal

and pile burning are feasible from a logistical standpoint, mechanical removal will not be effective in removing the majority of the trees; the smallest ones. These seedlings are too numerous to remove and often hidden by grass. The unit would require re-treatment much sooner than the proposed alternative. There would not be overall benefits to perennial grasses and forbs that would result from a broadcast prescribed burn; no significantly increased soil fertility or germination opportunities. Annual wildflower diversity would not benefit as germination would still be inhibited by the presence of existing decadent thatch over 95% of the treatment area.
Due to the significantly increased heat retention time to soils at burn pile locations (approximately 3% of the treatment area), perennial bunch grasses and native seed banks would be killed. Annual grasses and invasive species would have a greater potential for establishment.

Invasive Weeds

Sterilized soils beneath the burn pile locations, due to significantly greater heat retention time, would increase the potential for invasive species establishment more than the proposed action. The nearby infestations of tansy ragwort pose some threat of spread under all alternatives. However, due to the expected extended length of time of bare soil in 3% of the treatment area, there is more opportunity for invasive weed seeds to occur in these niches and germinate. Flower heads average 55 achenes, giving an approximate range of 50 000 to 150 000 achenes per plant. (Poole 1940). After pollination, the achenes ripen in about 7 to 10 days. Achenes produced on the lower branches are on average heavier and have higher germination rates than those produced on the tops. However, wind dissemination is not as effective as is popularly supposed. A heavy infestation of ragwort spreads mainly in the direction of the prevailing wind and then largely by marginal spread. The vast majority of seed is deposited within 10 m of the original infestation (Poole 1940). The germination rate is 50 to 86% under suitable conditions. Onshore winds occur frequently in the King Range and could spread the tansy seed in a westerly direction toward the heart of the treatment area. Follow up inspection and hand removal would need to be implemented under any alternative.

Although equipment will be inspected before operations begin, there is still a slight potential for invasive species to arrive on site via chainsaw equipment.

Soils

Under Alternative D there would not be an increase in soil erosion; although there could be some minor spot soil movement at the burn pile sites. However, it is expected that the remaining standing grass and vegetation would effectively stabilize any soils made mobile by wind or rain forces since the soil in the burn pile areas will likely be exposed for a longer period of time that would be a cooler and faster prescribed burn treatment. Soils would likely not suffer from compaction as a result of crews working in the area. The soil in the project area is described as a silty loam and is born of weathered sandstone. Clay content and compaction issues are not described as characteristics of these soils. However, over the short term, the effects of repeated walking and working could increase overland flow of water and decrease the rate of infiltration. Using only

manual control, there would be some benefit to soils by way of increased available soil moisture and increased light availability; in areas of treatment, however, the added value of increased soil fertility would not occur. In terms of coastal grassland species, the prairie would not be benefited to the greatest extent feasible.

Cultural Resources
See analysis in Impacts of the Proposed Action.

Recreation
The chainsaws would significantly increase noise on site for the duration of the treatment, estimated to last one month. Pile burning operations would be spread out over approximately ten days. This may result in a reduction in visitor satisfaction levels exceeding 75%.

Visual Resources
With increased heat retention time to soils at burn pile locations, the area may develop a spotted appearance for several years following treatment due to differing plant species establishment. This effect could be dispersed through the unit by building smaller piles, rather than concentrating the effect with large piles.
Some pole-sized round wood would be visible at burn pile locations due to incomplete combustion. This effect could be reduced through intensive pile management during burning operations, however charcoal would remain visible for two years following treatment.

Social/Economic
The reduced threat of high intensity summertime wildfire and associated economic/property impacts to surrounding private land residences would be the same as the proposed action. However, the unit would require re-treatment much sooner than the proposed alternative. Established seedlings missed by chainsaw operators would require re-treatment within approximately 3-5 years.
Cost to the government would be approximately nine times the cost of the proposed action.

Terrestrial Species including T&E Species
Manual removal and pile burning would remove the existing Douglas-fir shrub/sapling component entirely, leaving no small snags that would serve as perch locations for foraging avifauna. This alternative would result in short-term, minor negative impacts to coastal grassland dependent species.

Alternative E - No Action

Air Quality
There would be no impact to air quality during burning operations if the No Action alternative is selected. The potential for poor air quality during summer wildfires would increase as fuel loading and resistance to control continues to increase.

Vegetation

Without management intervention of some kind, or barring a natural disturbance event such as a wildfire; the grassland prairie within this portion of the Strawberry Rock grazing allotment would 1) increase in hazard intensity along the wildland/urban interface, 2) convert from a deteriorated coastal prairie grassland to a mono-culture of poorly developed trees lacking a diverse understory, 3) reduce the local presence of the globally rare and threatened California oatgrass and Pacific Reedgrass series' as well as their associated species, and 4) decline in grazing value in terms of forage quantity and quality.

Invasive Weeds

Invasive weed spread on the project area would likely not change dramatically under the No Action alternative. The current year seed crop from invasive weeds would not be burned and destroyed as a result of the fire; thereby ensuring a larger seed crop available to potentially germinate in the spring. Existing grassland thatch would remain and thus inhibit some germination of invasive weeds over much of the area.

Soils

There would be no impact to the soils if the No Action alternative is selected. Soils would remain as described in the Affected Resource section of this environmental assessment.

Cultural Resources

See analysis in Impacts of the Proposed Action.

Recreation

Hunting opportunities would slowly decline as the open prairie landscape transformed into a closed forest. Visibility and deer populations would decline year after year. Sightseeing opportunities would slowly change from viewing a relatively open prairie to viewing a stunted forest. Access to Strawberry Rock, a scenic vista with frequent day use by the local community, would eventually become significantly more difficult.

Visual Resources

The landscape would eventually change from an open prairie setting to a closed, stunted forest. The view from atop Strawberry Rock would continue to degrade over the next 15 years, potentially becoming completely obstructed in the absence of a high intensity wildfire event.

Social/Economic

There would be no reduction to the threat of high intensity wildfire and associated economic/property impacts to surrounding private land residences. Fuel loading will continue to increase and wildfires would become more resistant to control. Grazing forage quality would continue to decline. Restoration to coastal prairie would be dependant upon high-intensity, summertime wildfires.

Terrestrial Species including T&E Species
Barring a future wildfire event, this alternative would allow the remaining coastal grassland habitat to eventual convert entirely to Douglas-fir habitat. This alternative would result in severe negative impacts to coastal grassland dependent species for the foreseeable future.

(c) Mitigating Measures

Air Quality
The Prescribed Fire Plan shall include an analysis of smoke sensitive areas, visibility hazards, transport wind direction, minimum meteorological conditions, monitoring requirements, and contingency plan. Burning would take place only on Permissive Burn Days as determined by the North Coast Unified Air Quality Management District, or with a variance granted by the District. Authorization would be obtained prior to ignition.

Signs would be posted along Prosper Ridge Road that read "CAUTION Smoky Conditions" and "Prescribed Fire Do Not Report". Firing operations would cease if visibility is reduced to 100 feet along the Prosper Ridge Road. Before ignitions begin the treatment area would be surveyed for recreationists. During operations all fire personnel would be on the lookout for public wandering into the area, and traffic control would be in place.

Terrestrial Species Including T&E Species
Activities in the project area are proposed to take place between September and February. This seasonal restriction reduces the potential impacts to ground nesting birds and species foraging or nesting/breeding in the area during the spring and summer.

(d) Residual Impacts

Although the dense, young tree stands would leave behind standing dead snags (average 4 to 7 feet in height), the available fuel for a summertime wildfire would be greatly diminished. The potential for a wildfire becoming a running crown fire with long distance spotting would be significantly reduced within the burn area.

Section 1.05 Consultation and Coordination

(a) Persons and Agencies Consulted

The following individuals were consulted during the initial phases of project planning:

Michael Evenson, adjacent private landowner
Dale Maharidge, adjacent private landowner
The Lower Mattole Firesafe Council
Chris Larson, Executive Director, Mattole Restoration Council
Lloyd Green, Inspector, North Coast Unified Air Quality Management District
Josh Free, Chief, Prosper Ridge Volunteer Fire Department
Hugh Scanlon, Vegetation Management Program Coordinator, California Dept. of Forestry and Fire Protection
Terrie Ridenhour, Battalion Chief, California Dept. of Forestry and Fire Protection

Detailed Discussion of Public Participation and Comment Process

The following efforts were made to incorporate public input into the decision making process:

BLM's interest in broadcast burning for fuel reduction and coastal prairie maintenance around the Windy Point / Strawberry Rock area was discussed at the Lower Mattole Fire Safe Council meeting on February 24, 2003. Due to budgeting and staff constraints very little progress was made in 2003.

Efforts were made to inform local landowners and a site tour was held in October, 2004. At the Lower Mattole Fire Safe Council meeting on November 4, 2004, a community project prioritization exercise was facilitated by the Humboldt County Planning Office for inclusion to the Humboldt County Master Fire Protection Plan. Proposed projects to address local fire issues that were identified and prioritized by community members are listed in the following table:

Project Priority	Project Description	Project Category
1	Local biomass development	Biomass Utilization
1	Triple Junction fire training center	Training
2	Fuels reduction demonstration at Dump	Demonstration/Pilot Project
3	Fire house on Panther Gap	Facilities
3	Prosper Ridge Rd.	Fuel Break
4	**Strawberry Rock/BLM broadcast burn**	**Burning**
4	Green Fir/Squaw Creek Broom	Clearance
4	Downtown Petrolia fuelbreak/Scotchbroom removal	Fuel Break
4	King Range Rd	Fuel Break
4	Mill Creek/Mathews Ranch Road	Fuel Break
4	Stansberry Rd. shade fuelbreak	Fuel Break
4	Wilder Ridge Phase II	Fuel Break
4	Scheinman/Lost Coast Camp fuels reduction	Other Fuel Rx
5	Fox Springs Rd. shaded fuelbreak	Fuel Break
5	Panther Gap Rd.- bottom	Fuel Break
6	Defensible space/fire safety education in schools	Community Education
6	Evedon defensible space	Defensible Space
6	Snider's demonstration fuel reduction	Demonstration/Pilot Project
6	Bear Wallow fuel break	Fuel Break
6	Boots Canyon Rd- bottom	Fuel Break
6	Doreen Drive	Fuel Break
6	Middle Road/Panther Gap shaded fuel break	Fuel Break
6	Prosper Ridge fuel break	Fuel Break
6	Saddle Mountain fuel break	Fuel Break
6	Smith-Etter fuel break	Fuel Break
6	Stewart Ridge (funded, not complete)	Fuel Break
6	Wilder Ridge fuel break, Phase I	Fuel Break
6	Windy Ridge Rd. shaded fuelbreak	Fuel Break
6	Downtown Petrolia fuels reduction	Other Fuel Rx
6	Hall fuels reduction	Other Fuel Rx
6	Kings Peak Rd. inholding	Other Fuel Rx
6	Petrolia School fuels reduction	Other Fuel Rx
6	Roche fuels reductions	Other Fuel Rx
6	Sturgeon fuels reduction	Other Fuel Rx

(DRAFT Humboldt County Master Fire Protection Plan, 2005, Appendix G)

The burn was not completed in 2004, and based on local resident concerns, additional public involvement efforts were initiated in 2005. The preliminary EA was made available for a public review and comment from October 18th through November 7th. The timeframe was based on the need to balance adequate time for comments with the optimum planting/burning weather for the project (prior to the onset of heavier late fall-winter rains.) The EA was mailed to 17 local residents and organizations. In addition, an on-site meeting was held on November 1 to discuss the project. At the meeting, BLM managers and resource specialists and the CDF Vegetation Management Program Coordinator described the project, and answered questions about specific aspects. Approximately 15 local residents attended the meeting.

Comments were received from five individuals and one local organization (Mattole Restoration Council) during the public comment period. The BLM appreciates the time and effort taken by commentors to review the EA and provide input. The BLM has delayed implementation of the project so that comments may be considered and analyzed.

Some of the issues identified in the comments on the preliminary EA included:

Comment: The proposed action does not consider the potential for risk of fire escape due to erratic winds, heavy fuels or other factors.

Response: Section 1.02(a) of the EA describes the conditions under which burning would be initiated. This section of the EA will be complemented by a much more specific Prescribed Fire Plan. This plan will take all of the factors in Section 1.02 into account and will be reviewed at the Regional and State level for conformance with safety elements. Several burns have been conducted on private lands surrounding the King Range in past years during the dry season and prior to the first fall rains. However, a decision was made to write the Strawberry Rock prescription to delay burning until after the first rains. This will result in a less intensive burn and will greatly reduce any chance of escape.

Comment: The prescribed fire will result in significant air quality impacts.

Response: Section 1.04(a) of the EA discusses air quality impacts. Burning would only be initiated during permissive burn days as determined by the North Coast Unified Air Quality Management District. The prescribed fire plan will include an analysis of smoke sensitive areas, visibility hazards, transport wind direction etc. (see 1.04c), and a contingency plan put into operation if air quality or visibility impacts occur.

Comment: The removal of thatch by the burn will accelerate erosion and could also increase runoff from springs & cause damage to Prosper Ridge Road.

Response: As stated in section 1.04(a) of the impact analysis only very minor increases in erosion and runoff are expected in the first year. Most of the burn will occur in a gently sloping to level area of perennial grassland/grasses whose root bases will remain and continue to hold the soil intact. Although the burn is scheduled for late fall at the beginning of the rainy season, the basal portions of perennial grasses will persist following fire and slow any overland water flow, thus aiding with infiltration.
In the springtime, grasses will green quickly with the moisture, increased nutrients and solar warming due to the residual black color left from the burn.

Comment: The BLM should consider other alternatives, including manual felling of some of the trees, or cutting all of the trees and burning the piles.

Response: The BLM has added three alternatives to the environmental assessment based on comments on the preliminary document.

Comment: The BLM may be incorrect assuming that the project area is historically a prairie. With acidic soils can the area historically be a prairie?

Response: Section 1.01(a) includes references to historic information showing that the area was coastal prairie. At the Strawberry Rock proposed project site, the soils are classified under the Bruhel soil series. This series is described as slightly acid to medium acid, and the vegetation as annual and perennial grasses and forbs (Soils of the King Range National Conservation Area (western slope) Humboldt County, California, 1984). Sawyer and Keeler-Wolf describes this area as coastal terrace prairie consisting of a mosaic of California oatgrass series and Pacific reedgrass series that often mix with tree series at a coarser scale (Douglas-fir). Typical species found in these types, that are also found within the project area include bracken (*Pteridium aquilinum*), California oatgrass (*Danthonia californica*), Douglas-fir (*Pseudotsuga menziesii*), Pacific reedgrass (*Calamagrostis nutkaensis*), tall-oatgrass (*Arrhenatherum elatius*), velvet grass (*Holcus lanatus*), vernal grass (*Anthonxanthum odoratum*), coyote brush (*Baccharis pilularis*), salal (*Gaultheria shallon*), and California blackberry (*Rubus ursinus*). The Nature Conservancy Global Heritage Program has listed the California Oatgrass and Pacific Reedgrass series' within coastal prairies, bluffs, terraces, wetlands and coastal uplands of all types as globally rare and threatened in California.

Comment: The EA states that it conforms to Lower Mattole Fire Plan. However, there is no mention of prescribed fire to reduce fuel loading in this plan.

Response: The Lower Mattole Fire Plan does not address this specific project, however it does contain/discuss specific goals that will be achieved through the project including:

"A simple comparison of current aerial photographs to those of 1942 (the oldest aerial photographs available) shows a significant increase in forest cover due to fire suppression. As well, close examination reveals a change in forest structure from older forests – those that probably evolved with fire – to the current structure of young, dense forests, and increased hardwood forests and brush. The photographs on the following page demonstrate this change in vegetation cover between 1942 and 2000 for the area surrounding the mouth of the estuary of the Mattole River, (at the top of the photographs), through the shrinking meadows along Prosper Ridge, to the dense growth along Four Mile Creek (along the bottom of the photographs). (LMFP, Chapter 2, pg. 3)

"Locally, the CDF Humboldt-Del Norte Ranger has identified the Mattole Valley and Prosper Ridge in general as a high priority area within the Unit with the following description: '*Many small communities are represented in this area. The potential for a large damaging fire in this area is significant. The fire history is also significant, some of the largest fires in the Unit have occurred in this area. This area has an apparent microclimate that supports the more extreme aspects of fire weather.'…'These areas [are] of a hazardous fuel build up. The most like[ly] process would be prescribed fire. Some smaller scale clearing and chipping may be done in and around structures.' "* (LMFP, Chapter 2, pg. 5)

"Efforts should be made to keep a fire on Prosper from spreading into the KRNCA. However, it is believed locally that a fire would more likely start in the KRNCA – probably on the beach – and spread up into the homesteads on Prosper." (LMFP, Chapter 6.8, pg. 42)

"Other concerns centered around reducing the risk of fires coming from the BLM campground and vicinity at the mouth of the Mattole." (LMFP, Chapter 6.8, pg. 44)

Maintaining evacuation/escape routes and potential safe zone at Windy Point (Chapter 6.8, pg. 42). They would be useless if inaccessible due to a crowning wildfire resulting from heavy fuel build up along Prosper Ridge Road.

"Prosper Ridge is heavily loaded with dense fuels. It is commonly believed that Prosper will burn, and probably pretty hot, at some point in the future. Facilitating emergency evacuation of the residents of Prosper Ridge is of utmost importance" (Chapter 6.8, pg. 43).

<u>Comment:</u> Burning will result in continued status quo which is more fire prone than either prairie or mature forest.

<u>Response:</u> The term "fire prone" can be vague and misleading. Wildfire behavior is driven by the interaction of fuels, weather, and topography.
Fuel loads within a prairie are significantly less than those within a forest. Fuels in grasslands, after greenup, are rapidly affected by changes in ambient weather conditions, whereas forest and brush fuels are also influenced by live fuel moisture (the amount of moisture within the living plant tissue which changes seasonally). This is why many grass fires in late spring and early summer do not burn into the canopy of surrounding trees. As summer progresses, the live fuel moisture in forest and brush fuels decreases and the canopy becomes available fuel for wildfires. Although prairie fuels are available to burn over more of the fire season than forest fuels, and commonly produce faster moving wildfires, the fires are usually considerably less intense, have much lower spotting potential, and are less resistant to control than established wildfires in forested fuel types. Wildfires in light prairie fuels respond much more favorably to water delivery via fire engines, helicopters, or fixed-wing retardant aircraft than forest fuels. Typically, grass fires are much easier to fight than forest fires.

Furthermore, fireline commanders and supervisors must take into account firefighter safety, particularly in regards to ingress and egress. Accessing a wildfire via roads that have light fuels and good visibility is preferable to driving along densely forested lands – that is the comfort level of commanders and supervisors is greatly increased.

Every year, during the months of September and October, the project site experiences weather and fuel conditions that are conducive to a high intensity wildfire with long range spotting. A wildfire pushed by north/northeast winds moving uphill towards Prosper Ridge, crowning through a forest or brush canopy would be significantly more difficult to control than one through grass. The last wildfire in the project area occurred in 1960 (Incident #HUU000304, CDF database).

Based on aerial photos and historic fire records, it has taken an estimated 45 years for the prairie to be encroached upon as much as the condition found today. As stated in the proposed action, Section 1.02(a), the purpose of the project is to arrest the encroachment, and set it back by at least 60%, or about 25 years. Treatment is not intended to fire-proof the existing landscape, but reduces the potential intensity level of summertime wildfires [Section 1.04(a)]. Coastal prairies in many instances are fire maintained. Based on the history of this site it is expected that Douglas-firs will indeed continue to sprout. The BLM will monitor the prairie condition and post-treat/re-treat as necessary to work toward 1) a more fire-safe environment, and 2) maintenance of coastal prairie.

Comment: EA does not mention recreation use at Strawberry Rock itself, which is a popular local spot.

Response: The affected environment section has been amended to show that recreational use of the Strawberry Rock area includes picnicking, wild strawberry picking, scenic viewing and paragliding, mostly by local residents [Section 1.03(b)]. The impacts section has been modified to show that the burn will enhance these opportunities by maintaining the open vista and grassland [Section 1.04(a)].

Comment: Trees will stand more than 3 years as cited in the document -- visual and fuels concerns. To mitigate the impacts they should be cut down.

Response: The impact section was amended to show that some trees will remain standing after three years before they eventually fall [Section 1.04(a)]. This is not considered to be a major visual impact in the King Range ecosystem, as fire burned snags are an integral part of the area's natural visual landscape. A post treatment assessment of the burn area will include a discussion of residual fuels, including snags, and any further treatment needs.

The EA will be recirculated for a second round of public comments with the additions/changes made based on the initial round of public input. Any changes made as a result of this second public comment period will be incorporated into the Decision Record.

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Section 1.06 Finding Of No Significant Impact

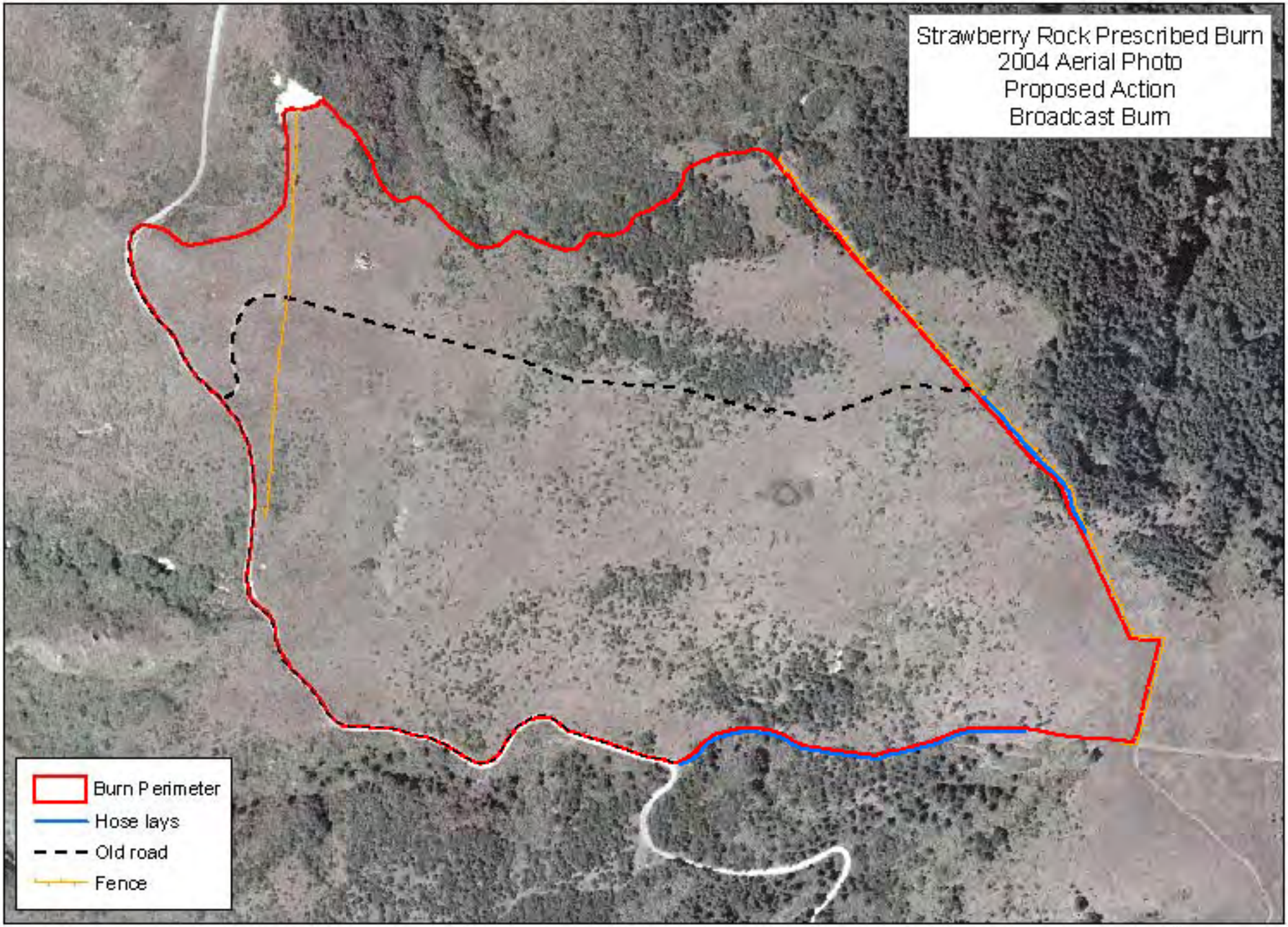
Section 1.07

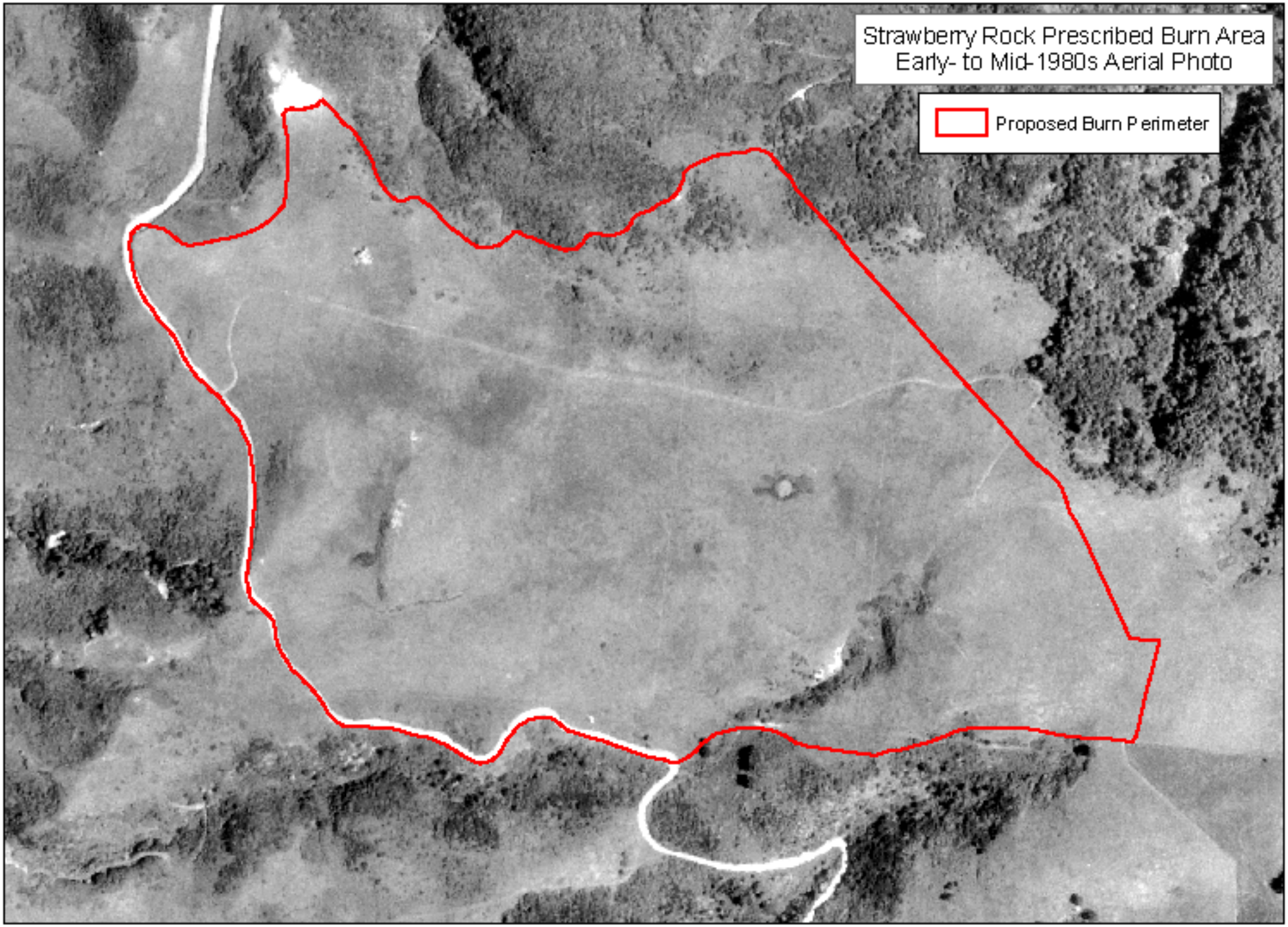
Having reviewed this Environmental Assessment, including the explanation and resolution of any potentially significant environmental impacts, the BLM has determined that the Proposed Action with the mitigation measures (if needed) will not have any significant impacts on the human environment and that an EIS is not required. The proposed action is also in conformance with the approved land use plan.

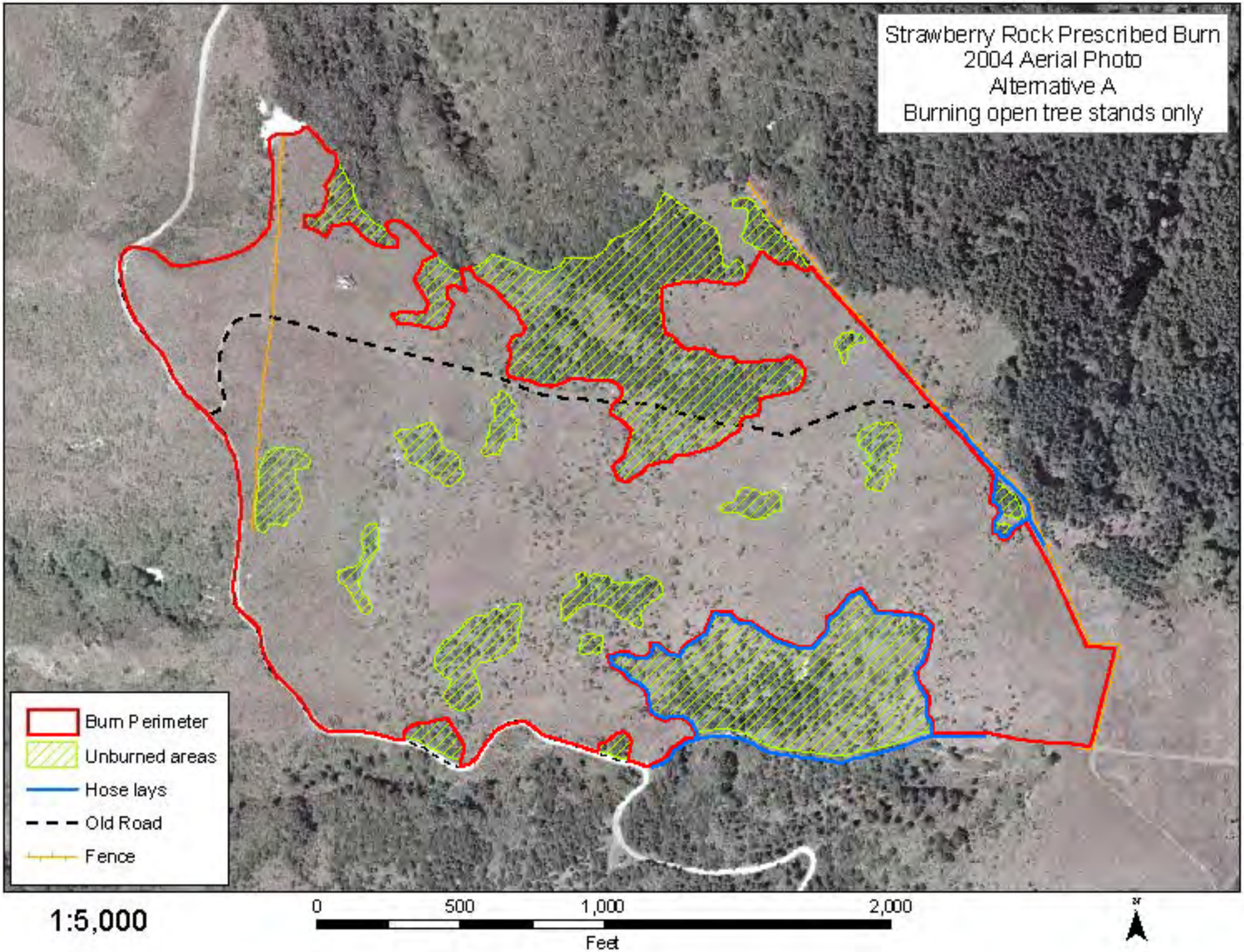
Authorized Official: _____ Date: ___/___/___

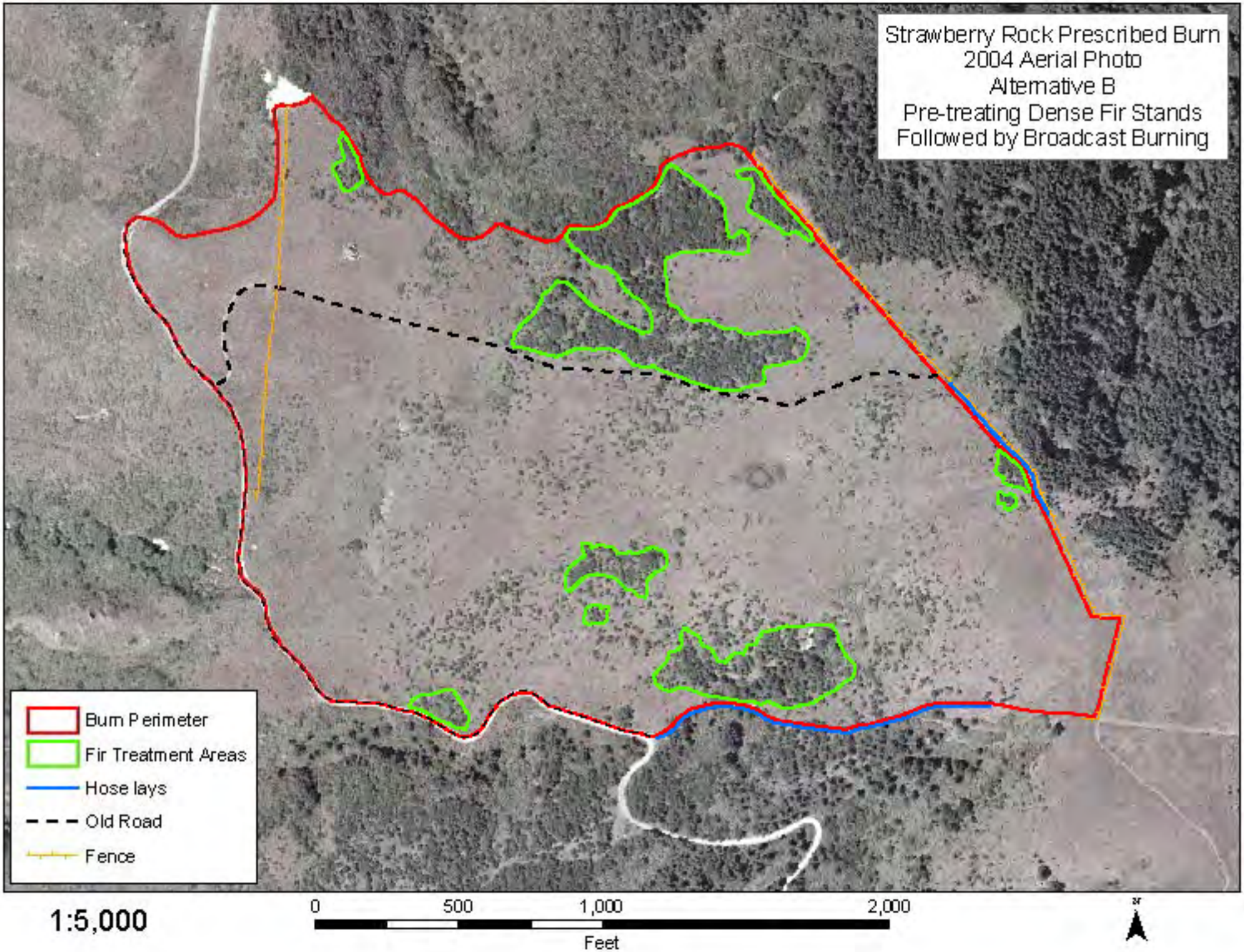
Appendices

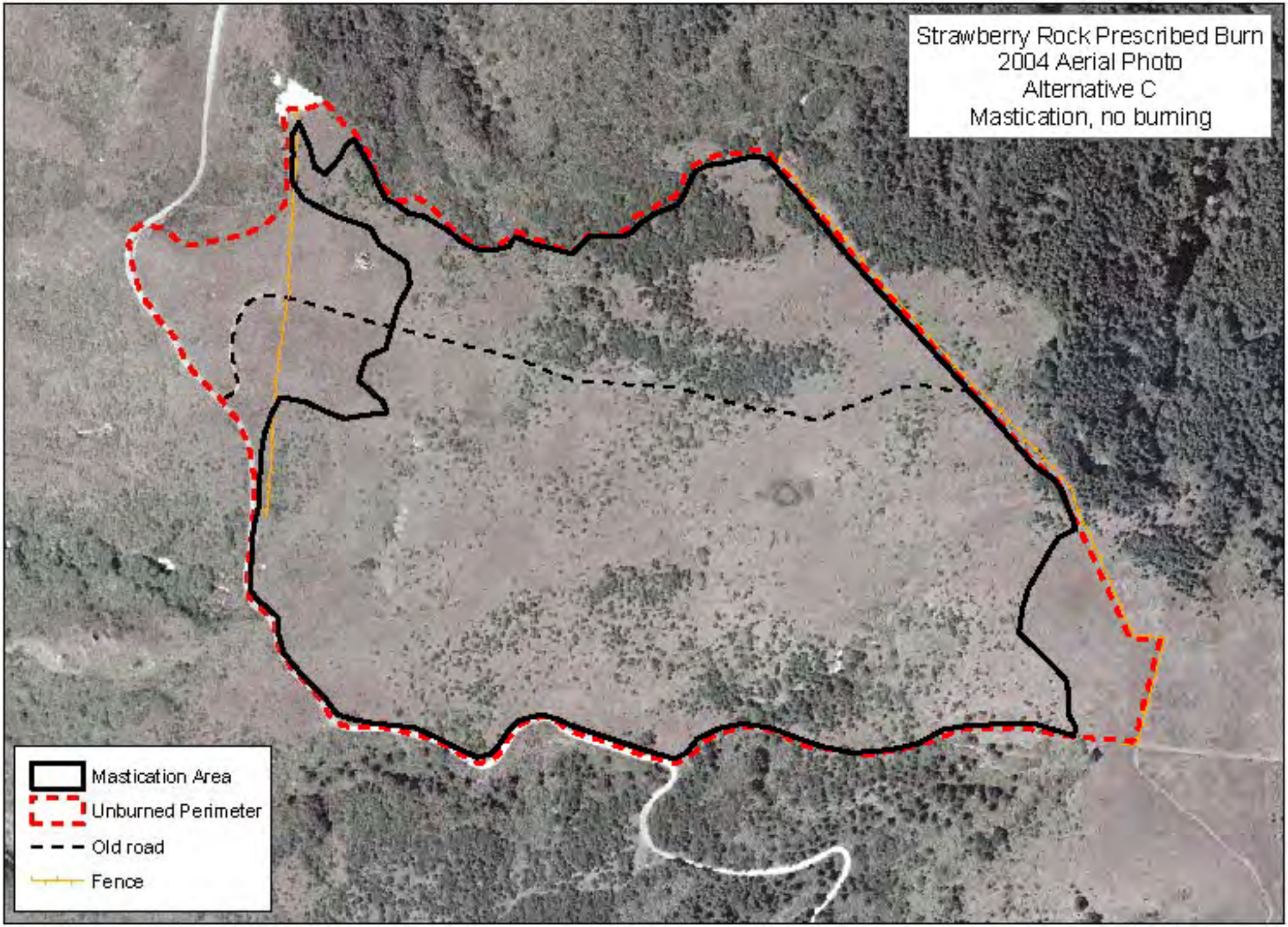
Map 1	2004 Aerial Photo, Proposed Action, Broadcast Burn
Map 2	Early- to Mid-1980s Aerial Photo
Map 3	2004 Aerial Photo, Alternative A, Burning open tree stands only
Map 4	2004 Aerial Photo, Alternative B, Pre-treating Dense Fir Stands Followed by Broadcast Burning
Map 5	2004 Aerial Photo, Alternative C, Mastication, no burning
Map 6	2004 Aerial Photo, Alternative D, Manual tree cutting and pile burning

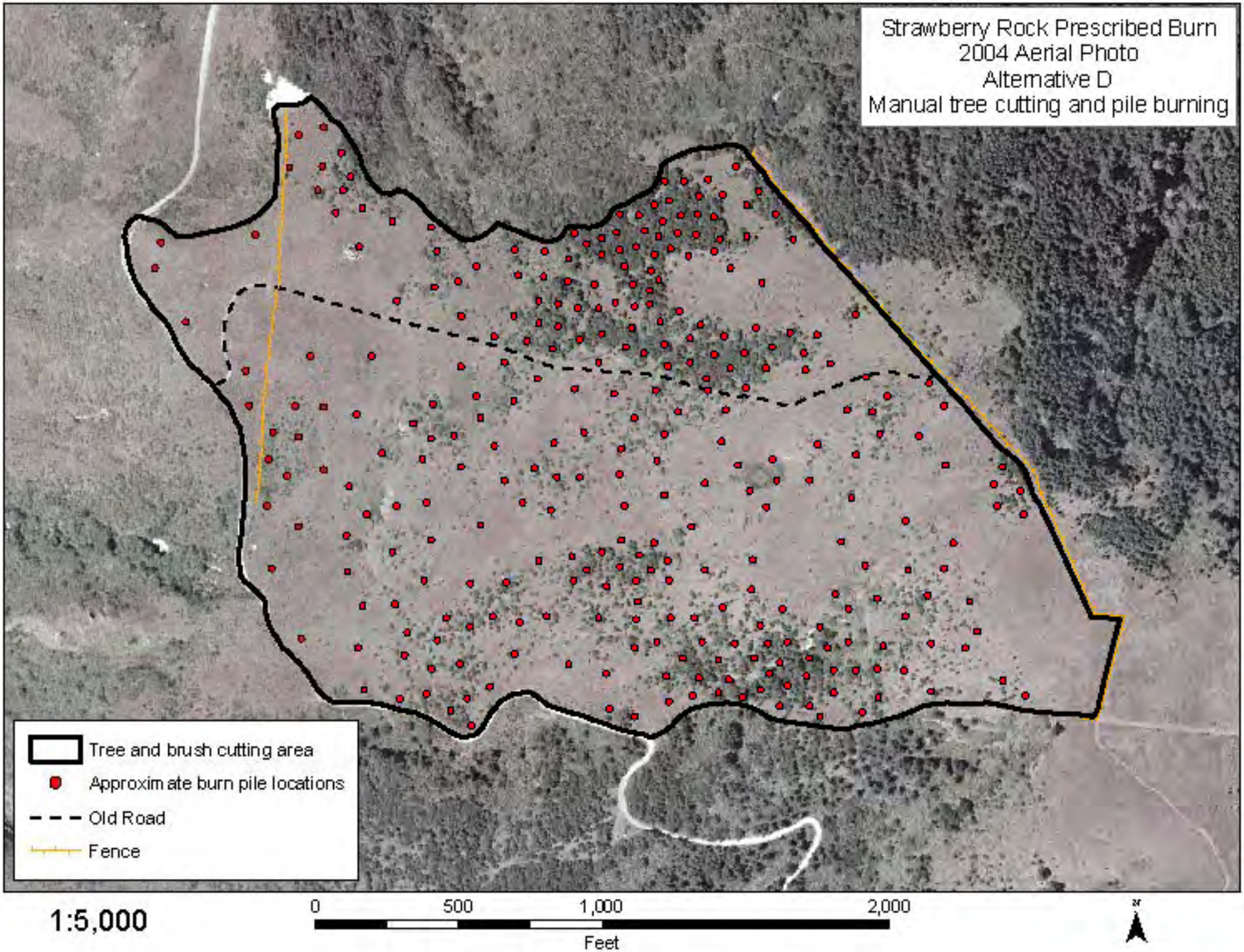

Strawberry Rock Prescribed Burn
2004 Aerial Photo
Proposed Action
Broadcast Burn
Burn Perimeter
Hose lays
Old road
Fence
1:5,000
0
500
1,000
2,000
Feet
N


Strawberry Rock Prescribed Burn Area
Early- to Mid-1980s Aerial Photo
Proposed Burn Perimeter
1:5,000
0
500
1,000
2,000
Feet
N


Strawberry Rock Prescribed Burn
2004 Aerial Photo
Alternative A
Burning open tree stands only
Burn Perimeter
Unburned areas
Hose lays
Old Road
Fence
1:5,000
0
500
1,000
2,000
Feet
N


Strawberry Rock Prescribed Burn
2004 Aerial Photo
Alternative B
Pre-treating Dense Fir Stands
Followed by Broadcast Burning
Burn Perimeter
Fir Treatment Areas
Hose lays
Old Road
Fence
1:5,000
0
500
1,000
2,000
Feet
N


Strawberry Rock Prescribed Burn
2004 Aerial Photo
Alternative C
Mastication, no burning
Mastication Area
Unburned Perimeter
Old road
Fence
1:5,000
0
500
1,000
2,000
Feet
N


Strawberry Rock Prescribed Burn
2004 Aerial Photo
Alternative D
Manual tree cutting and pile burning
Tree and brush cutting area
Approximate burn pile locations
Old Road
Fence
1:5,000
0
500
1,000
2,000
Feet
N